

Icebreaker T-shirt: a Wearable Device for Easing Face-to-Face Interaction

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Abstract

This paper discusses the development of Icebreaker T-shirt with results from an experiment with shy users.

1. Introduction

Initiating a conversation is a common challenge for shy people; here, we introduce the Icebreaker T-shirt, intended to be worn in real-world social events, and aimed at increasing comfort feeling and familiarity between strangers by leveraging online social network information (e.g. Facebook) on clothing. Using advances of computer-mediated communication (CMC) with design principles of slow technology that values reflective experience of the user, we examine to what extent advanced technologies can improve social skills and may lead to more meaningful relationships in the real world.

2. Background

Various forms of online CMC have been reported to increase social relationships due to the fact that they allow users to focus on information content rather be overly concerned with social customs and non-verbal clues from interaction partners. However, these allow identity distortion, unrealistic expectations, and withdrawal from real-world activities; thus making face-to-face communication harder for socially anxious and low interpersonal skilled users. Social proximity applications (SPAs) in smartphones enable online information access in a pervasive manner. Our approach has similarities to SPAs like iBand¹ and SocialButton² that allow users with similar interests to share online information. However, most SPAs are deployed in unsophisticated objects causing low aesthetic value in “wear-ability” that can limit the

¹ M. Kanis, et al., “Toward wearable social networking with iBand”, *CHI '05 extended abstracts on Human factors in computing systems*, ACM, NY, USA, 2005, pp. 1521-1524

² L. Johannes, et al., “SocialButton – Mobile Technology Enhancing Social Interaction”, *Proceedings of the International Conference on Next Generation Mobile Applications, Services and Technologies*, IEEE Computer Society, DC, USA, 2007, pp. 14-18

usefulness in sensitive social situations. iBand is closest to our approach; it uses an embedded infrared sensor in seeking other users in a close proximity whereas our Icebreaker T-shirt prototype uses Radio Frequency Identification (RFID) system to exchange users when they shake hands. However, none of SPA works so far has been designed to support shy users.

3. Design

Developed on a hypothesis that familiarity may enhance comfort and relaxation when meeting strangers, thus helping the wearer select new acquaintances while maintaining the naturalness of the social interaction and comforting property of clothing. The shirt is equipped with a set of RFID reader and tag embedded on the cuff of its long-sleeve. This allows two wearers to exchange identities when shaking hands. Next to it, there is a microcontroller designed to retrieve their public profile and preference from their Facebook pages using a smartphone (this feature was left out, and information of test subjects was pre-stored in the microcontroller used in the first proof-of-concept prototypes). The microcontroller matches users’ profiles and preferences. This results in a level of their social compatibility displayed using conductive thread and heated-sensitive paints. The more interests they have in common, the higher their compatibility levels (conveyed with more colourful display) become.

4. Experiment

Four prototype T-shirts have been developed and tested with 11 self-report shy subjects in two speed-dating sessions: with shirt and without. 73% said the shirt was helpful to their meeting with strangers. One said: “It gave a sense of having something in common to begin the conversation, something we both were interested in. Whereas when we didn’t have the shirt, I felt we were only trying to make small talk.” Although, the sample tested was small, our first experiment underlines some problems and potentials of the chosen technologies for improving interpersonal skills of shy people.